

Executive Summary

TREE team members studied TC Systems' metal finishing process operation to find ways for TC Systems to reduce waste. This report outlines TC Systems' best opportunities for waste reduction. The report identifies several areas where a reduction in hazardous wastes generation, in chemical use, water use, and downtime on the process line due to wastewater treatment can be achieved.

The conclusions presented in this report should be verified by TC Systems staff. Reduction opportunity descriptions begin on page 6. Calculations are shown in Appendix B and economic analysis in Appendix C. The opportunities are:

#1 Drag-out Reduction

Water use reduced	282,000 gallons/year	\$2,000	
Process Chemical use reduced	35,000 lbs/year	\$3,000	
Wastewater generation reduced	10,000 gallons/year	\$3,000	
Sludge handling reduced	5,000 lbs/year	<u>\$1,000</u>	
		\$9,000	Total Annual Savings for #1

#2 Implement Counter Current Rinses

Water use reduced	502,000 gallons/year	\$3,000	
Wastewater generation reduced	21,000 gallons/year	\$6,000	
Sludge handling reduced	10,000 lbs/year	<u>\$3,000</u>	
		\$12,000	Total Annual Savings for #2

#3 Add 3rd Rinse to Deoxidizer Line

Water use reduced	374,000 gallons/year	\$2,000	
Wastewater generation reduced	23,000 gallons/year	\$7,000	
Sludge handling reduced	11,000 lbs/year	<u>\$3,000</u>	
		\$12,000	Total Annual Savings for #3

#4 Perform Water Use Audit of Facility

Water use reduced	1,881,000 gallons/year	\$11,000	Total Annual Savings for #4
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